Parents' awareness of overweight in themselves and their children: cross sectional study within a cohort (EarlyBird 21)

A N Jeffery, L D Voss, B S Metcalf, S Alba, T J Wilkin

Obesity is a serious public health concern. More than half of British adults are overweight, and obesity among preschool children has increased by an alarming 70% in the past generation.[1 2] We aimed to explore parents' awareness of overweight and obesity in themselves and their children, and their degree of concern about weight.

Participants, methods, and results

We studied 277 healthy randomly recruited children (mean age 7.4 years) and parents from the EarlyBird study.[3] Overweight and obesity were defined as body mass index at least 25 and 30 in adults, and at least 91st and 98th centiles of the UK 1990 body mass index reference curves for children.[4]

Before we weighed them, parents completed a written questionnaire asking them to estimate their own and their child's weight on a five point scale ranging from "very underweight" to "very overweight." Responses indicating level of concern about weight were similarly ranked from "very worried about underweight" to "very worried about overweight."

Children and parents were significantly heavier than UK norms (table): 52/277 (19%) children, 141/273 (52%) mothers, and 165/230 (72%) fathers were overweight (including obese). Among overweight parents, 40% mothers (45% fathers) judged their own weight "about right" and 27% (61%) were unconcerned about their weight.

Only a quarter of parents recognised overweight in their child. Even when obese, 33% mothers (57% fathers) saw their child's weight as "about right." Parents were less likely to identify overweight in sons than daughters: only 27% of overweight or obese boys were classified as at least "a little overweight," compared with 54% of overweight girls (P = 0.01). More mothers than fathers correctly assessed their child's weight (84% *v* 76%, P = 0.06).

Maternal weight status did not affect mothers' awareness of their chidren's weight: 82% of overweight mothers were correct compared with 82% of normal weight mothers (P = 0.50). However, only 74% overweight fathers were correct compared with 85% normal weight fathers (P = 0.08).

More than half of the parents of obese children expressed some degree of concern about their child's weight, but only a quarter were even "a little worried" if their child was overweight. Most parents (86%) who were unaware that their child was overweight, were also unconcerned about their child's weight. One in ten parents expressed some concern about underweight in normal weight children.

Prevalence of overweight in parents in the highest and lowest socioeconomic groups did not differ—59% in classes I and II were overweight compared with 62% in classes VI, VII, and VIII (P = 0.63; National Statistics Socioeconomic Classification 2001). Neither was there a difference in correct perception of the child's weight between socioeconomic groups (78% *v* 82%, P = 0.34).

Comment

Overweight goes largely unrecognised; parents are poor at identifying overweight in themselves and their children, and less likely to identify overweight in sons. The reasons for poor awareness might include denial, reluctance to admit a weight problem, or desensitisation to excess weight because being overweight has become normal. Obesity is now a problem across all social groups. Our data confirm recent findings indicating that the longstanding inverse relationship between social class and obesity has been lost, at least in the United Kingdom.[5]

Acknowledgment of excess weight and an understanding of its health consequences are essential first steps in tackling obesity. The layperson's perception of average weight, however, now conflicts with the clinical definition of normal weight, and a label of overweight from a health professional may be insufficient motivation for a change in lifestyle. The apparent lack of parental concern about their child being overweight probably stems from a lack of awareness. Until this is resolved, we are missing critical partners in our efforts to stem an impending health crisis.

This article was posted on bmj.com on 26 November 2004: http://bmj.com/cgi/doi/10.1136/bmj.38315.451539.F7

Peninsula Medical School, University Medicine, Derriford Hospital, Plymouth PL6 8DH

A N Jeffery *senior research nurse*

L D Voss *senior research fellow*

B S Metcalf *statistician/data manager*

S Alba *assistant statistician*

T J Wilkin *professor of endocrinology and metabolism*

Correspondence to: A N Jeffery alison.jeffery@pms.ac.uk

BMJ 2005;330:23–4

Parents' awareness of their families being overweight. Values are numbers (percentages)

Child's weight	Children (n=277)	Boys (n=154)	Girls (n=123)	Mothers; fathers correctly assessing child's weight	Mothers; fathers correctly assessing daughter's weight	Mothers; fathers correctly assessing son's weight	Mothers; fathers worried about overweight	Mothers; fathers normal weight	Mothers; fathers overweight or obese
Normal (2≤ BMI centiles <91)	222 (80)	84	74	189/220 (86); 149/182 (82)*	81/92 (88); 60/72 (83)*	109/128 (85); 95/109 (81)*	2/220 (1); 1/182 (1)	108/220 (49); 57/189 (30)	112/220 (51); 132/189 (70)
Overweight (91≤ BMI centiles <98)	22 (8)	7	10	5/23 (22); 5/20 (25)†	4/12 (33); 5/11 (46)†	1/11 (9); 0/9 (0)†	6/23 (26); 5/20 (25)	13/23 (57); 3/21 (14)	10/23 (43); 18/21 (86)
Obese (BMI centiles ≥98)	30 (11)	8	14	20/30 (67); 12/28 (43)†	13/17 (76); 8/16 (50)†	7/13 (54); 4/12 (33)†	19/30 (63); 13/28 (46)	8/29 (28); 6/23 (26)	21/29 (72); 17/23 (74)

BMI=body mass index.
*Parents were correct if they thought their child's weight was "about right."
†Parents were correct if they thought their child's weight was either "a little" or "very" overweight.

What is already known on this topic

Obesity in British children is increasing—prevalence rose by 150% between 1984 and 1998

Lay definitions of ideal weight and overweight deviate from clinical definitions in adults

What this study adds

Many parents are unaware, and thus unconcerned, that their children are overweight

Contributors: AJ designed the study, collected the data, analysed the results, and wrote the paper. LV supervised the study design and edited drafts of the paper. BM and SA helped with data management and statistical analyses. TW helped with interpretation of the results and is director of the EarlyBird Study. TW is guarantor.

Funding: Diabetes UK, Smith's Charity, S&SW NHS Executive R&D, Child Growth Foundation, Beatrice Laing Foundation, Abbott, Astra Zeneca, GlaxoSmithKline, Ipsen, Unilever, Diabetes Foundation, and EarlyBird Diabetes Trust.

Competing interests: None declared.

Ethical approval: Plymouth local research ethics committee of the South and West Devon Health Authority (1999).

1 National Audit Office. *Tackling obesity in England.* London: Stationery Office, 2001.
2 Bundred P, Kitchiner D, Buchan I. Prevalence of overweight and obese children between 1989 and 1998: population based series of cross sectional studies. *BMJ* 2001;10:322-6.
3 Voss LD, Kirkby J, Metcalf BS, Jeffery AN, O'Riordan C, Murphy MJ, et al. Preventable factors in childhood that lead to insulin resistance, diabetes mellitus and the metabolic syndrome: the EarlyBird diabetes study 1. *J Pediatr Endocrinol Metab* 2003;16:1211-24.
4 Cole TJ, Freeman JV, Preece MA. Body mass index reference curves for the UK, 1990. *Arch Dis Child* 1995;73:25-9.
5 Saxena S, Ambler G, Cole TJ, Majeed A. Ethnic group differences in overweight and obese children and young people in England: cross sectional survey. *Arch Dis Child* 2004;89:30-6.

(Accepted 25 September 2004)

doi 10.1136/bmj.38315.451539.F7

Incidence of hepatitis C virus and HIV among new injecting drug users in London: prospective cohort study

Ali Judd, Matthew Hickman, Steve Jones, Tamara McDonald, John V Parry, Gerry V Stimson, Andrew J Hall

Centre for Research on Drugs and Health Behaviour, Department of Primary Care and Social Medicine, Imperial College London, London W6 8RP
Ali Judd *research associate*
Matthew Hickman *senior lecturer*
Steve Jones *researcher*
Gerry V Stimson *emeritus professor*

Sexually Transmitted and Blood Borne Virus Laboratory, Health Protection Agency London
Tamara McDonald *research scientist*
John V Parry *deputy director*

Infectious Disease Epidemiology Unit, London School of Hygiene and Tropical Medicine, London
Andrew J Hall *professor*

Correspondence to: A Judd
a.judd@imperial.ac.uk

BMJ 2005;330:24–5

In England, the low prevalence of HIV among injecting drug users during the 1990s was attributed in part to the introduction of harm reduction interventions in the late 1980s. Also, the prevalence of hepatitis C virus in the late 1990s was thought to be relatively low compared with other countries, at around 40% overall and 15% among those who had been injecting drugs for less than six years.[1] We carried out a prospective cohort study of new injecting drug users in London to estimate the incidence of hepatitis C virus and HIV.

Participants, methods, and results

In 2001, we recruited from community settings mainly in London, but also in Brighton, 428 injecting drug users who were aged below 30 years or had been injecting for six years or fewer. All had injected in the previous four weeks and could provide addresses for follow up. They completed interviewer administered questionnaires and provided oral fluid specimens and optionally dried capillary blood spots for testing for antibodies to hepatitis C virus and HIV using published methods.[2,3] They were followed up 12 months later. We calculated incidence using standard person time methods.

Most of the participants (91%) were recruited in London. The mean (SD) age was 27.4 (5.3) years, and 29% of the participants were women. Three fifths (61%) of the sample at baseline had been injecting for less than four years, and the median frequency of injecting was 2.5 times a day. Most (71%) mainly injected opiates, although just over half (53%) had injected cocaine or crack in the previous year. Participants reported high levels of injecting risk behaviour, with 24% at baseline reporting injecting in the previous four weeks with needles and syringes used by someone else, and 53% sharing injecting paraphernalia. The baseline prevalence of antibody to hepatitis C virus was 44% and of antibody to HIV was 4% (table).

The overall follow up rate was 70%, and we found no difference between those followed up and those lost to follow up for sociodemographic characteristics or injecting risk behaviour. The incidence of antibody to hepatitis C virus was 41.8 cases per 100 person years and of antibody to HIV was 3.4 cases per 100 person years (see table).

Comment

The incidence of hepatitis C virus in England is high and of HIV higher than expected. These findings are corroborated by ongoing surveillance data, and suggest that transmission may have recently increased.[1] Injecting drug users in London have a higher incidence of hepatitis C virus than those in many cities worldwide, and an incidence of HIV comparable to that among men who have sex with men attending clinics for sexually transmitted infection in London.[4]

Possible explanations for the rising incidence include changes in patterns of injecting drug use, with greater injection of crack and injecting risk behaviour in newer injecting drug users than in those injecting in the early to mid-1990s. In addition there may have been increases in the size of the population of injecting drug users over and above any increase in protective interventions. Recent estimates suggest that current

This article was posted on bmj.com on 12 November 2004: http://bmj.com/cgi/doi/10.1136/bmj.38286.841227.7C